April 27, 1937. G. H. YOUNG 2,078,552

REFRIGERATOR

Filed Jan. 11, 1935 3 Sheets-Sheet 1

Fig. 1

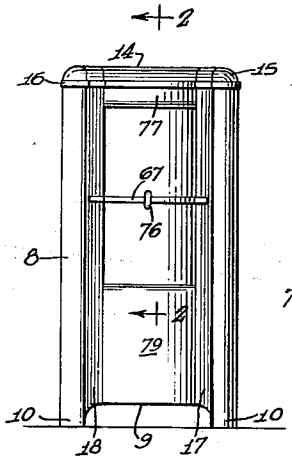


Fig. 2

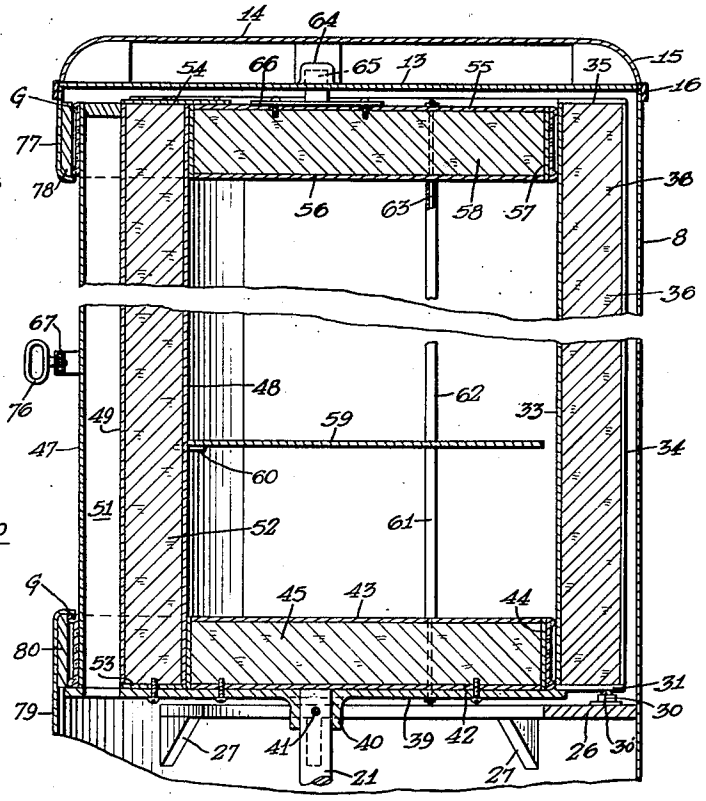
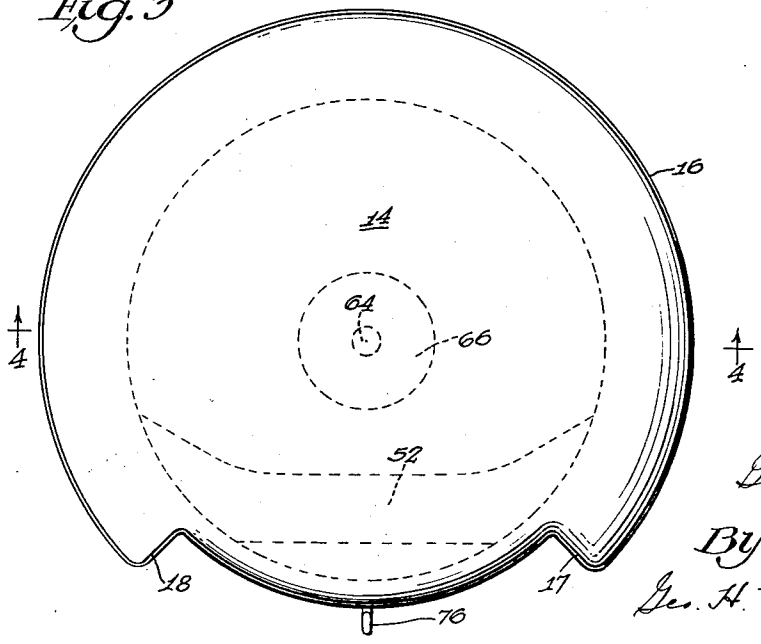


Fig. 3



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REFRIGERATOR

Filed Jan. 11, 1935 3 Sheets-Sheet 2

Fig. 4

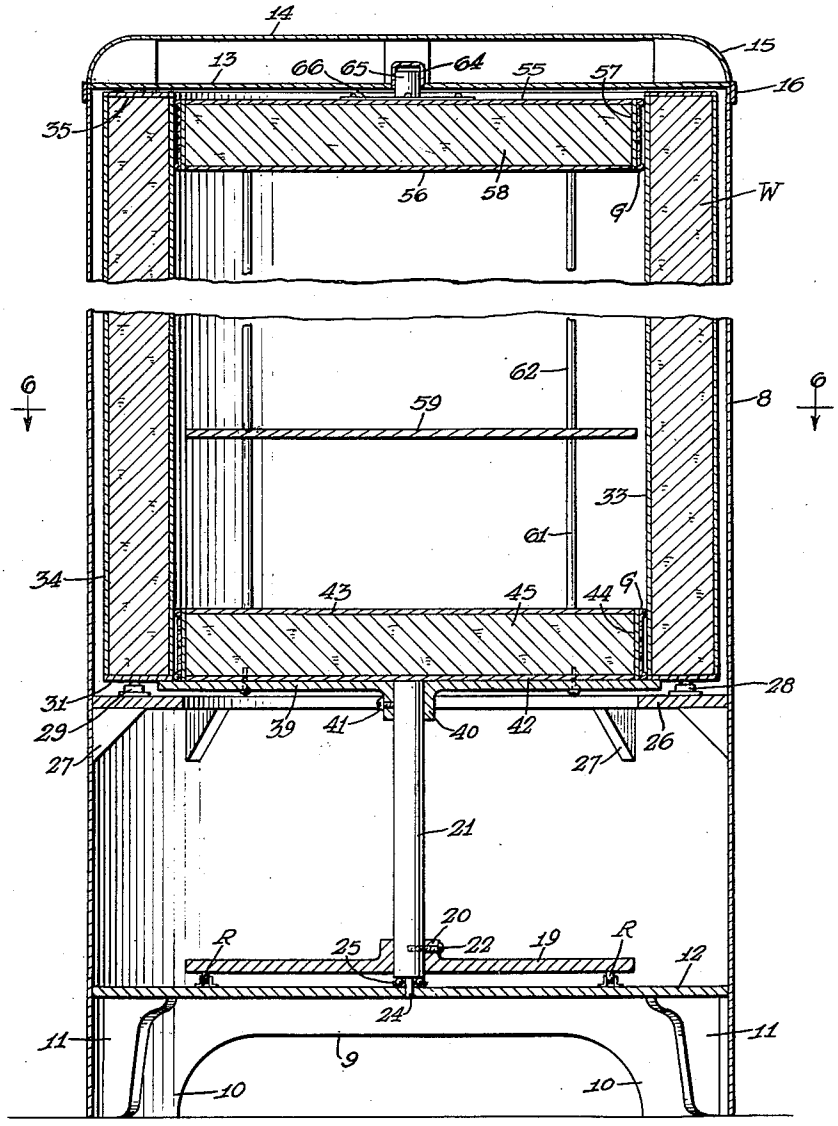
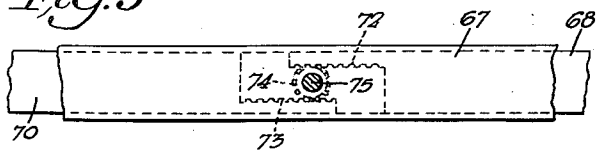


Fig. 5



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REFRIGERATOR

Filed Jan. 11, 1935 3 Sheets-Sheet 3

Fig. 6

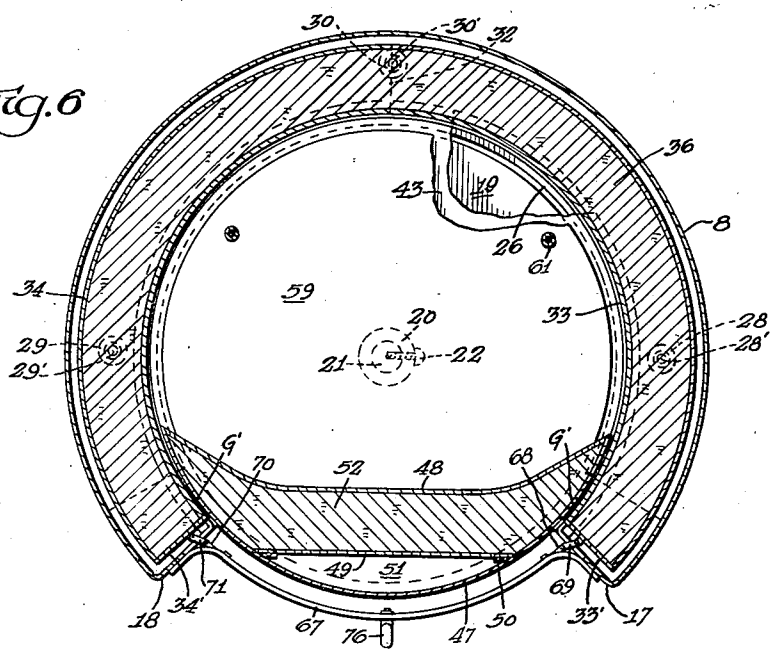
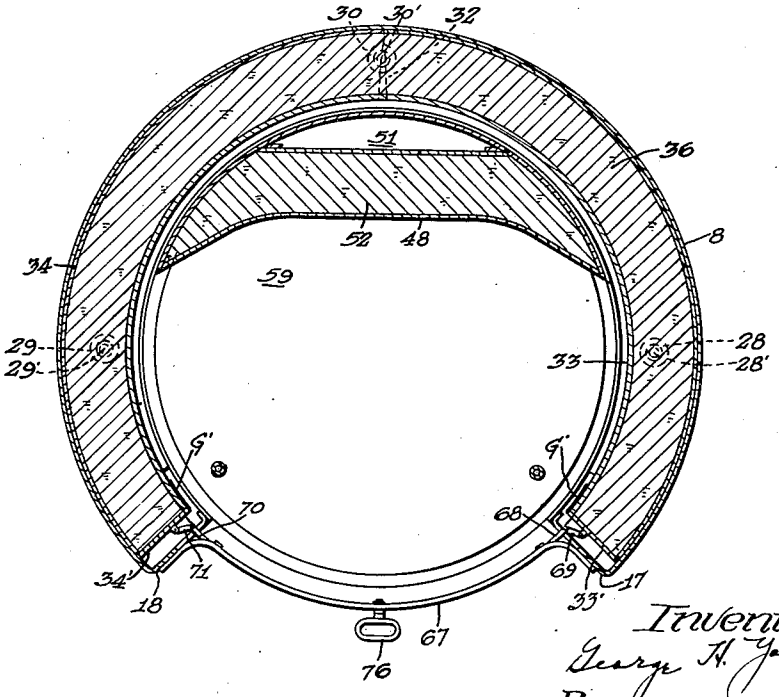


Fig. 7



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UNITED STATES PATENT OFFICE

2,078,552

REFRIGERATOR

George H. Young, Oak Park, Ill.

Application January 11, 1935, Serial No. 1,317

15 Claims. (Cl. 312—189)

This invention relates to refrigerators and more particularly to a novel construction therefor.

Conditions are sometimes encountered in which it is not possible to use a refrigerator having the ordinary hinged doors because there is not sufficient room to permit swinging of the doors to and from closed position. Furthermore, it is necessary to hinge doors to a refrigerator at either the right or left hand side thereof so as to afford the easiest access to the compartments of the refrigerator and this requires merchandisers to carry a stock of refrigerators equipped with both right and left hand doors so that they will always be prepared to supply a refrigerator most suitable for each particular installation. When a hinged refrigerator door is swung from closed position, cold air in the refrigerator is withdrawn therefrom, and when the door is swung back to closed position, warm air is forced thereinto and this is a further disadvantage of hinged doors. Moreover, rectangularly shaped refrigerators cannot always be properly fitted into a corner, and particularly across a corner, for this entails considerable waste of space. Sweating around the edges of hinged doors sometimes occurs because it is difficult to attain a tight seal thereabout and this is objectionable.

With the foregoing and other kindred disadvantages of known refrigerators in mind, the primary object of my invention is to provide access to the compartments of a refrigerator without swinging hinged doors from closing position so that the cold air in a refrigerator will not be forcibly withdrawn therefrom each time access is had to the compartments thereof and warm air will not be forced thereinto when access to the compartments is closed off.

Another object is to so construct a refrigerator that it may be conveniently fitted into a corner without an excessive waste of space and which may be used in those circumstances wherein there is not sufficient room to permit the swinging of hinged doors and also to enable a refrigerator of standard construction to be used under all conditions to thereby avoid the necessity of providing so-called right and left hand refrigerators and thereby enable merchandisers to carry much smaller inventories.

Further objects are to provide a novel refrigerator of circular construction and to mount parts thereof for rotation about a vertical axis; to facilitate access to the shelves of a refrigerator; to encase the insulated compartments of a refrigerator so as to provide an air chamber thereabout and thereby prevent sweating on the casing of the refrigerator; to tightly seal the joints about the openings through which access is had to the compartments in the refrigerator to prevent leakage and sweating thereabout; to firmly lock the rotative parts of the refrigerator against undesired rotation; and to provide a refrigerator of simple and economical construction and which will be efficient in use and attractive in appearance.

A selected embodiment of my invention is illustrated in the accompanying drawings wherein

Fig. 1 is a front elevation of my novel refrigerator;

Fig. 2 is a fragmentary vertical sectional view taken substantially on the line 2—2 on Fig. 1;

Fig. 3 is a top plan view;

Fig. 4 is a vertical sectional view taken substantially on the line 4—4 on Fig. 3;

Fig. 5 is a detail view of the operating devices of the locking means;

Fig. 6 is a horizontal sectional view taken substantially on the line 6—6 on Fig. 4 and showing the parts in closed position; and

Fig. 7 is a view similar to Fig. 6 showing the parts in open position.

In the form of my invention illustrated in the accompanying drawings 8 indicates a substantially cylindrical casing cut away at the lower end thereof as indicated at 9 to define legs 10 having braces 11 (Fig. 4) therein which support a plate 12 providing the bottom of the refrigerator. The marginal edge of a substantially circular plate 13 rests on the top edge of the casing 8. The marginal portions of the circular top 14 are rounded downwardly to provide a flange 15, the free edge of which rests on the top of the marginal edge of the plate 13. The flange 15 and the plate 13 are fast to the top of the casing 8 by a band 16.

The cylindrical shape of the casing 8 is interrupted at the front of the refrigerator by bending the casing 8 inwardly to provide inwardly extending flanges 17 and 18 spaced from each other so that each flange lies about forty-five degrees on each side of a diameter of the casing 8 that intersects the opposite side of said casing equi-distantly from each of the flanges. An opening is thereby provided between the inner edges of the flanges 17 and 18 which lies inwardly of the normal periphery of the casing 8. The top 14 and the flange 15 thereof as well as the plates 12 and 13 have recesses therein complementary to the opening between the inner

ends of the flanges 17 and 18 and also complementary to the flanges themselves.

The structure thus far described constitutes for the most part the housing of my refrigerator and encloses the insulated parts thereof. When mechanical means are employed for reducing the temperature within the insulated compartment or compartments of the refrigerator, the operative parts thereof are likewise mounted for rotation within the housing. Likewise, when ice is used as the cooling medium, the ice compartment of the refrigerator is mounted for rotation in the housing.

The form of my invention illustrated in the accompanying drawings is one adapted to be cooled by mechanical means and an uninsulated compartment is provided to receive the operative parts of the mechanical means such as the condenser, compressor and motive means therefor, and the like. The uninsulated compartment is provided immediately above the plate 12 and the operative parts of the mechanical means for cooling the refrigerator are mounted on a circular table 19 which is of a diameter substantially less than that of the casing 8 so that the table may freely rotate within the casing. A boss 20 is provided at the center of the table 19 and has a bore therein to receive the lower end of a vertical spindle 21 which is fast to the table 19 by a screw 22 which passes through the boss and into the spindle. A pin 24 at the lower end of the spindle 21 projects into a centrally located opening in the plate 12 and an anti-friction bearing 25 is disposed about this pin and rests on the plate 12. The lower end of the spindle 21 rides on the anti-friction bearing 25 to facilitate rotation thereof. Rollers R are mounted on the plate 12 at spaced intervals, as for example at ninety degree intervals, and the under side of the marginal portion of table 19 rests on the rollers to be supported and be guided thereby during its rotation.

A ring 26 is supported at the top of the uninsulated compartment by cleats 27 that are secured to the casing 8. Balls 28 and 29 are mounted in the ball sockets 28' and 29' respectively. The sockets are mounted on the top of the ring 26 in spaced relation with the flanges 17 and 18 and in diametrical relation with each other and a ball 30 is mounted in the ball socket 30' carried by the top of the plate 26 midway between the ball sockets 28' and 29'.

A substantially segmental plate 31 rests on the balls 28, 30 and 29 and the respective ends thereof are arranged in juxtaposition to the flanges 17 and 18. The plate 31 is divided, adjacent the ball 30, into two sections, the division therein being indicated by 32 in Figs. 6 and 7 in a manner and for a purpose to be explained more fully hereinafter.

The inner wall 33 of the insulated side wall W is provided by a substantially cylindrical plate, a portion of the cylindrical shape thereof being cut away so that the wall 33 has an extent similar to that of the plate 31 and the lower edge of this wall rests on the inner marginal edge of the plate 31. Those parts of the lower edge of the wall 33 which rest on the plate 31 near the ends of the plate are joined to the plate in any approved manner as by welding, while that part of the lower edge of the wall 33 which rests on the plate 31 near the division 32 therein, is free therefrom for a purpose which will be explained more fully hereinafter.

The outer wall 34 of the wall W is provided by a plate which is shaped similar to the wall 33 and the lower edge of the wall 34 rests on the top of the outer marginal edge of the plate 31, and the lower edge of the wall 34 is joined to the plate 31 in much the same way as the lower edge of the wall 33 is joined thereto. A plate 35, similar to the plate 31, is provided at the top of the walls 33 and 34 and this plate 35 is divided like the plate 31 and the top edges of the walls 33 and 34 are joined to the plate 35 in the same manner as the lower edges of these walls are joined to the plate 31. The space enclosed by the plates 31 and 35 and the walls 33 and 34 and the plates 33' and 34' at the free ends of the plates 31 and 35 and the walls 33 and 34 is filled with suitable insulation 36 such as corkboard or the like and this arrangement provides the side wall W of the insulated compartment of my refrigerator.

A substantially circular table 39 is provided immediately above but out of contact with the ring 26 and has a centrally located boss 40 thereon in which there is a bore into which the upper end of the spindle 21 is extended and the spindle is retained in this bore by a screw 41 which passes through the boss and into the spindle. Thus, the table 39 is joined to the table 19 for rotation therewith. The marginal edges of the table 39 extend below the inner edge of the ring 31. The table 39 supports the bottom and top walls of the insulated compartment of my refrigerator.

The bottom insulated wall includes a substantially circular plate 42 which is smaller than but which rests on and is secured to the table 39. A similar plate 43 is spaced above the plate 42 and a band 44 passes about and is joined to the peripheries of the plates 42 and 43. Corkboard 45 or other suitable insulation fills the space enclosed by the plates 42 and 43 and the band 44.

The closure for the opening between the flanges 17 and 18 is provided by a vertically extending wall that is mounted for rotation with the table 39 and the plates 42 and 43 are cut away to receive this vertical wall which includes a segment shaped plate 47, the lower edge of which rests on and is secured to the table 39. The ends of the plate 47 are connected by a vertical plate 48, the vertical marginal edges of which are inclined toward the plate 47 and the intermediate part of which is spaced from but is chordal to said plate 47. Another vertical plate 49 extends parallel with the intermediate part of the plate 48 and is also chordal to the plate 47, and the plate 49 is arranged intermediate of the plate 48 and the plate 47 and the edges thereof abut the plate 47. The plate 49 is secured to the plate 47 by lugs 50. A space 51 is thus provided between the plates 47 and 49 when mechanical means are used to cool the refrigerator, the connections to the evaporator of the mechanical means, which evaporator is mounted in the insulated compartment, are passed through this space. The space enclosed by the plates 48 and 49 and parts of the plate 47 is filled with corkboard 52 or other suitable insulation, the bottom of this space being closed by a plate 53 fast to the table 39 and the top of this space is closed by a plate 54, the inner marginal edge of which projects inwardly of the plate 48.

The top plate 55 of the top insulated wall is fast to the inwardly projecting part of the plate 54 and the plate 55 is similar in outline to the plate 43. The bottom plate 56 of the top insulated wall is spaced from the plate 55 and is complementary thereto and a band 57 passes about the edges of these plates and the space en-

closed by these plates and this band is filled with corkboard 58 or other suitable insulation.

The top insulated wall has considerable overhang from the plate 54 and therefore that part of the top wall spaced from the plate is supported from the lower insulated wall. Likewise, any shelves which may be provided intermediate the top and bottom insulated walls will be supported from the vertical plate 48 and will have considerable overhang therefrom. In the accompanying drawings I have shown one shelf 59 which rests on pegs 60 fast in the plate 48. Sleeves are provided to support shelves such as 59 and the top insulated wall and these sleeves include sections 61 which extend between the plate 43 and the bottom of the shelf 59 and other sections 62 which extend between the top of the shelf 59 and the lower face of the plate 56. If additional shelves were provided, sleeve sections would successively extend between these shelves and the uppermost sleeve section would extend between the uppermost shelf and the plate 56. Rods such as 63 pass through the top insulated wall, sleeve sections 62, shelf 59, sleeve sections 61 and the plate 39. Nuts fast at the opposite ends of these rods draw the parts through which the rods pass into clamped relation.

A socket 64 is provided at the center of the plate 13 in alignment with the spindle 21. A stub shaft 65 carried by a plate 66 fast to the plate 55 is vertically aligned with the spindle 21 and projects into the socket 64 and guides the structure carried by the table 39 in its rotation in the refrigerator.

When the parts are in the position shown in Fig. 6, the band 44 is spaced from the lower part of the wall 33 and the band 57 is spaced from the upper part of this wall 33. The spaces between these walls are filled with suitable gaskets G so that tight connections are provided between the insulated wall W and the insulated top and bottom walls. Gaskets G' are mounted on the wall 33 adjacent the plates 33' and 34' and engage the adjacent part of the plate 47 when the parts are in the position shown in Fig. 6 to prevent leakage through the sides of the opening between the flanges 17 and 18.

The parts are retained in the position shown in Fig. 6 by a suitable locking device which includes a hollow supporting member 67 having end portions that are fast to the flanges 17 and 18. A slide 68 is mounted in the hollow supporting member 67 and extends from the center thereof toward one end and it is connected to the plate 33' by a link 69. Another slide 70 is mounted in the supporting member 67 and extends toward the other end thereof and is connected to the plate 34' by a link 71. As best shown in Fig. 5 the inner ends of the slides 68 and 70 are reduced and have racks 72 and 73 respectively provided on the adjacent faces of the reduced portions thereof. These racks mesh with a pinion 74 fast on a shaft 75 journaled in the supporting member 67 and having a handle 76 thereon.

That part of the flange 15 between the flanges 17 and 18 is elongated as indicated at 77 and this elongated part 77 is joined to the upper ends of the flanges 17 and 18. A rail 78 is mounted inwardly of the part 77 and extends slightly beyond the flanges 17 and 18. The gasket G which is also on the upper part of the plate 47 seats against the rail 78 to seal against leakage at the upper part of the opening between the flanges 17 and 18 when the parts are in the position shown in Fig. 6.

A panel 79 extends between that part of the flanges 17 and 18 extending below a point slightly above the table 39. A rail 80 is provided behind that part of the panel 79 extending above the table 39 and this rail extends slightly beyond the flanges 17 and 18. The gasket G which is also mounted on the lower part of the plate 47 engages the rail 80 to seal the lower part of the opening between the flanges 17 and 18 against leakage when the parts are in the position shown in Fig. 6.

When the parts are in the position shown in Fig. 6, the refrigerator is closed. When it is desired to open the refrigerator, the handle 76 is grasped and the shaft 75 is rotated whereupon the pinion 74 so acts on the racks 72 and 73 that the slides 68 and 70 are moved away from each other. As explained, these slides are connected to the plates 33' and 34' at opposite ends of the wall W and therefore as the slides move away from each other the walls 33' and 34' move away from each other which bends the walls 33 and 34 outwardly from the position shown in Fig. 6 into the position shown in Fig. 7 and in this movement the wall 31 rides on the balls 28, 30 and 29. It will be remembered that the plates 31 and 35 are divided midway between the ends thereof and that the walls 33 and 34 are joined thereto only near the ends thereof and not adjacent the divisions therein. Normally, that is to say, when the refrigerator is closed, the divisions in the plates 31 and 35 are also closed as shown in Fig. 6, but when the walls 33 and 34 expand outwardly, the divisions in the plates 31 and 35 are open as shown in Fig. 7. The outward movement of the wall W disengages the wall 33 from the gaskets G and disengages the gaskets G' from the wall 47. Therefore, the parts carried by the table 39 are free to rotate and they may be rotated from the position shown in Fig. 6 to the position shown in Fig. 7 whereupon access may be had freely to the compartment enclosed within the insulated walls as soon as the plate 47 has moved from the position in which it closes the opening between the flanges 17 and 18. When the parts carried by the table 39 are rotated back into position such that the plate 47 is again closing the opening between the flanges 17 and 18, the handle 76 is again grasped and rotated to cause the slides 68 and 70 to move toward each other, whereupon the wall 33 is brought back into engagement with the gaskets G, and the gaskets G' again engage the wall 47 and the gaskets G again engage the rails 78 and 80 respectively and the compartment enclosed by the insulated wall is again sealed. Whenever the wall W is disengaged from the wall 33 the parts carried by the table 39 may be freely rotated by merely shoving on one of such parts, such as the plate 47, the plate 43 or the like.

The foregoing describes the manner in which my refrigerator is arranged when mechanical means are employed to cool the compartment enclosed by the insulated walls. If, however, ice is to be used as the refrigerant, the table 39 could be omitted and the parts described as being mounted on this table would then be mounted on the table 19. The ice compartment would be provided at the top of the compartment enclosed by the insulated walls and the drain pipe for the ice compartment would be passed through the space 51. Of course, this arrangement would entail shortening the panel 79 but other than these, and possibly other minor changes, the re-

frigerator would be constructed substantially in the manner set forth.

It is manifest in the foregoing description that I have provided a refrigerator wherein a space is enclosed by insulated walls and in which space a low temperature may be created and maintained. Likewise, access may be had easily to all parts of the storage compartment for the places within the compartment whereat food or the like may be stored may be brought into position at the opening between the flanges 17 and 18 and therefore access may be had to various places within the compartment without unnecessarily reaching around other stored articles and often remote articles may be removed without moving any other articles.

Inasmuch as access is had to the compartments by rotating a part of the refrigerator within the housing thereof, the extraction of cold air from and the introduction of warm air into the insulated compartments incidental to the opening and closing of the hinged doors is avoided. Furthermore, since the refrigerator does not have hinged doors and as all movements necessary to attaining access into the refrigerator may be performed within the housing, the refrigerator may be used at those places whereat there is not sufficient room to move hinged doors, and furthermore, the need for providing so-called left and right hand refrigerators is avoided.

Sweating is prevented on the housing of the refrigerator by reason of the fact that when the refrigerator is closed there is an air space between the casing and the insulated walls. Likewise, closing of the refrigerator is effected by a clamping action which insures tight joints and thus leakage through the joints and attended sweating is avoided.

While I have illustrated and described a selected embodiment of my invention, it is to be understood that this is capable of variation and modification and I therefore do not wish to be limited to the precise details set forth but desire to avail myself of such changes and alterations as fall within the purview of the following claims.

I claim:

1. In a refrigerator, an upright wall providing a refrigerator compartment open at the top, bottom and front, a rotatable part including means for closing the open top, bottom and front, and means for moving said upright wall to and from engagement with said rotatable part whereby said rotatable part may be rotated to move the means thereon closing the open front of said refrigerator compartment from closing position to thereby afford access into said compartment through said open front.

2. In a refrigerator, an upright wall providing a refrigerator compartment open at the top, bottom and front, a part including means for closing said open top, bottom and front and also providing supporting means for articles stored in said compartment, means supporting said part for rotation about a vertical axis, and means for moving said upright wall to and from engagement with said part whereby said part may be rotated to move the means thereon closing the open front of said refrigerator compartment from closing position to thereby afford access into said compartment through said open front.

3. In a refrigerator, an upright wall providing a refrigerator compartment open at the top, bottom and front, a part including means for closing said open top, bottom and front and also providing supporting means for articles stored in said compartment, means supporting said part for rotation about a vertical axis, and means for holding said upright wall in engagement with said part and including means for moving said wall relative to said part whereby said part may be rotated to move the means thereon closing the open front of said refrigerator compartment from closing position to thereby afford access into said compartment through said open front.

4. In a refrigerator, an upright insulated wall providing a refrigerator compartment open at the top, bottom and front, a rotatable part including a bottom insulated wall for closing the bottom of said compartment, a top insulated wall for closing the top of said compartment, and a front insulated wall for closing the front of said compartment, means supporting the rotatable part for rotation relative to said upright wall, and means for moving said upright wall into engagement with said rotatable part to hold said rotatable part against rotation and also operable to move the upright wall from engagement with said rotatable part whereby the front insulated wall may be moved from closing position relative to said open front to thereby afford access into said compartment through said open front.

5. In a refrigerator, a casing having an opening therein, an upright insulated wall providing a refrigerator compartment open at the top, bottom and front, the opening in the front of said compartment being aligned with the opening in said casing, a rotatable part including a bottom insulated wall for closing the open bottom of said compartment, a top insulated wall for closing the open top of said compartment, and a front insulated wall for closing the open front of said compartment when said rotatable part is disposed in a predetermined position, and means supporting the upright insulated wall for movement relative to said rotatable part.

6. In a refrigerator, a casing having an opening therein, an upright insulated wall providing a refrigerator compartment open at the top, bottom and front, the opening in the front of said compartment being aligned with the opening in said casing, a rotatable part including a bottom insulated wall for closing the open bottom of said compartment, a top insulated wall for closing the open top of said compartment, and a front insulated wall for closing the open front of said compartment when said rotatable part is disposed in a predetermined position, means supporting the upright insulated wall for movement relative to said rotatable part, and means for holding said upright insulated wall in clamping engagement with said rotatable part and operable to hold said rotatable part in said predetermined position.

7. In a refrigerator, a casing having an opening therein, an upright insulated wall providing a refrigerator compartment open at the top, bottom and front, the opening in the front of said compartment being aligned with the opening in said casing, a rotatable part including a bottom insulated wall for closing the open bottom of said compartment, a top insulated wall for closing the open top of said compartment, and a front insulated wall for closing the open front of said compartment when said rotatable part is disposed in a predetermined position, means supporting the upright insulated wall for movement relative to said rotatable part, and means for holding said upright insulated wall

in clamping engagement with said rotatable part and operable to hold said rotatable part in said predetermined position, said holding means including means for moving said upright wall to and from clamping engagement with said rotatable part.

8. In a refrigerator, a casing having an opening therein, an upright insulated wall providing a refrigerator compartment open at the top, bottom and front, the opening in the front of said compartment being aligned with the opening in said casing, a rotatable part including a bottom insulated wall for closing the open bottom of said compartment, a top insulated wall for closing the open top of said compartment, and a front insulated wall for closing the open front of said compartment when said rotatable part is disposed in a predetermined position, means supporting the upright insulated wall for movement relative to said rotatable part, means for holding said upright insulated wall in clamping engagement with said rotatable part and operable to hold said rotatable part in said predetermined position, and means interposed between the top and bottom insulated walls and said upright wall for sealing the joint therebetween.

9. In a refrigerator, a casing having an opening therein, an upright insulated wall providing a refrigerator compartment open at the top, bottom and front, the opening in the front of said compartment being aligned with the opening in said casing, a rotatable part including a bottom insulated wall for closing the open bottom of said compartment, a top insulated wall for closing the open top of said compartment, and a front insulated wall for closing the open front of said compartment when said rotatable part is disposed in a predetermined position, the top and bottom insulated walls being aligned with the adjacent marginal portions of said upright wall and the marginal portions of the front wall being arranged in overlapping relation with the parts of the upright wall adjacent the opening in the front, and means for sealing the joints between the top, bottom and front insulated walls and said upright insulated wall.

10. In a refrigerator, a casing having an opening therein, an upright insulated wall providing a refrigerator compartment open at the top, bottom and front, the opening in the front of said compartment being aligned with the opening in said casing, a rotatable part including a bottom insulated wall for closing the open bottom of said compartment, a top insulated wall for closing the open top of said compartment, and a front insulated wall for closing the open front of said compartment when said rotatable part is disposed in a predetermined position, the top and bottom insulated walls being aligned with the adjacent marginal portions of said upright wall and the marginal portions of the front wall being arranged in overlapping relation with the parts of the upright wall adjacent the opening in the front, means for sealing the joints between the top, bottom and front insulated walls and said upright insulated wall, means supporting said upright wall for movement relative to said rotatable part, and means for clamping said upright wall in engagement with said rotatable part to hold said rotatable part in said predetermined position.

11. In a refrigerator, a substantially cylindrical casing having an opening in the cylindrical wall thereof, a substantially cylindrical insulated wall in said casing and normally spaced therefrom to provide air space therebetween and having an opening therein slightly larger than the opening in said casing and aligned with the opening in said casing, a horizontal table in said casing, means supporting said table for rotation in said casing, a unit mounted on said table for rotation therewith and including a bottom insulated wall, a top insulated wall spaced from the bottom wall and an insulated wall connecting the top and bottom walls and adapted to close said openings, said insulated walls cooperating to enclose a space in said casing wherein a low temperature may be maintained, and means supporting said substantially cylindrical wall for movement relative to said unit, said substantially cylindrical wall moving into said air space when moved away from said unit.

12. In a refrigerator, a substantially cylindrical casing having an opening in the cylindrical wall thereof, an upright substantially cylindrical insulated wall in said casing and normally spaced therefrom to provide air space therebetween and having an opening therein slightly larger than the opening in said casing and aligned with the opening in said casing, a horizontal table in said casing, means supporting said table for rotation in said casing, a unit mounted on said table for rotation therewith and including a vertical insulated wall adapted to close said openings, a bottom insulated wall at the lower end of the vertical wall, a top insulated wall at the upper end of the vertical wall, said insulated walls cooperating to enclose a space in said casing wherein a low temperature may be maintained, means supporting said upright substantially cylindrical wall for movement relative to said unit, said upright substantially cylindrical wall moving into said air space when moved away from said unit, and releasable means for maintaining said upright substantially cylindrical wall in sealing engagement with said unit.

13. In a refrigerator, a substantially cylindrical casing having an opening in the cylindrical wall thereof, an upright substantially cylindrical insulated wall in said casing and normally spaced therefrom to provide air space therebetween and having an opening therein slightly larger than the opening in said casing and aligned with the opening in said casing, a horizontal table in said casing, means supporting said table for rotation in said casing, a unit mounted on said table for rotation therewith and including a vertical insulated wall adapted to close said openings, a bottom insulated wall at the lower end of the vertical wall, and a top insulated wall at the upper end of the vertical wall, said insulated walls cooperating to enclose a space in said casing wherein a low temperature may be maintained, said upright substantially cylindrical wall including relatively movable parts, and means supporting this wall for movement relative to said unit.

14. In a refrigerator, a substantially cylindrical casing having an opening in the cylindrical wall thereof, an upright substantially cylindrical insulated wall in said casing and normally spaced therefrom to provide air space therebetween and having an opening therein slightly larger than the opening in said casing and aligned with the opening in said casing, a horizontal table in said casing, means supporting said table for rotation in said casing, a unit mounted on said table for rotation therewith and including a vertical insulated wall adapted to close said openings,

a bottom insulated wall at the lower end of the vertical wall, and a top insulated wall at the upper end of the vertical wall, said insulated walls cooperating to enclose a space in said casing wherein a low temperature may be maintained, said upright substantially cylindrical wall including relatively movable parts, means supporting said upright wall for movement relative to said unit and means for maintaining the relatively movable parts of said upright substantially cylindrical wall in clamping engagement with said unit.

15. In a refrigerator, a substantially cylindrical casing having an opening in the cylindrical wall thereof, an upright substantially cylindrical insulated wall in said casing and normally spaced therefrom to provide air space therebetween and having an opening therein slightly larger than the opening in said casing and aligned with the opening in said casing, a horizontal table in said casing, means supporting said table for rotation in said casing, a unit mounted on said table for rotation therewith and including a vertical insulated wall adapted to close said openings, a bottom insulated wall at the lower end of the vertical wall, and a top insulated wall at the upper end of the vertical wall, said insulated walls cooperating to enclose a space in said casing wherein a low temperature may be maintained, said upright substantially cylindrical wall including relatively movable parts, means supporting said upright wall for movement relative to said unit and means for maintaining the relatively movable parts of said upright substantially cylindrical wall in clamping engagement with said unit, the means for maintaining the relatively movable parts of said upright wall in clamping engagement with said unit and including operable means for moving the relatively movable parts of said upright substantially cylindrical wall relative to each other and relative to said unit.

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